



[4910-13]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 27

[Docket No. FAA-2012-0820; Special Conditions No. 27-028-SC]

Special Conditions: Eurocopter France, EC130T2; Use of 30-Minute Power Rating.

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final special conditions; request for comments.

SUMMARY: These special conditions are issued for the Eurocopter France Model EC130T2 helicopter. This model helicopter will have the novel or unusual design feature of a 30-minute power rating, generally intended to be used for hovering at increased power for search and rescue missions. The applicable airworthiness regulations do not contain adequate or appropriate safety standards for this design feature. These special conditions contain the additional safety standards that the Administrator considers necessary to establish a level of safety equivalent to that established by the existing airworthiness standards.

DATES: The effective date of these special conditions is July 30, 2012. We must receive your comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION].

ADDRESSES: Send comments identified by docket number FAA-2012-0820 using any of the following methods:

Federal eRegulations Portal: Go to <http://www.regulations.gov> and follow the online instructions for sending your comments electronically.

Mail: Send comments to Docket Operations, M-30, U.S. Department of Transportation (DOT), 1200 New Jersey Avenue, SE., Room W12-140, West Building Ground Floor, Washington, D.C., 20590-0001.

Hand Delivery of Courier: Take comments to Docket Operations in Room W12-140 of the West Building Ground Floor at 1200 New Jersey Avenue, S.E., Washington, D.C., between 8 a.m., and 5 p.m., Monday through Friday, except Federal holidays.

Fax: Fax comments to Docket Operations at 202-493-2251.

Privacy: The FAA will post all comments it receives, without change, to <http://regulations.gov>, including any personal information the commenter provides. Using the search function of the docket web site, anyone can find and read the electronic form of all comments received into any FAA docket, including the name of the individual sending the comment (or signing the comment for an association, business, labor union, etc.). DOT's complete Privacy Act Statement can be found in the Federal Register published on April 11, 2000 (65 FR 19477-19478), as well as at <http://DocketsInfo.dot.gov>.

Docket: Background documents or comments received may be read at <http://www.regulations.gov> at any time. Follow the online instructions for accessing the docket or go to the Docket Operations in Room @12-140 of the West Building Ground Floor at 1200 New Jersey Avenue, SE., Washington, D.C., between 9 a.m., and 5 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Eric Haight, Rotorcraft Standards Staff, ASW-111, Rotorcraft Directorate, Aircraft Certification Service, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5204; facsimile (817) 222-5961.

SUPPLEMENTARY INFORMATION:

Reason for No Prior Notice and Comment before Adoption

The FAA has determined that notice and opportunity for public comment are impractical because we do not expect substantive comments, and because this special condition only affects this one manufacturer. We also considered that these procedures would significantly delay the issuance of the design approval, and thus, the delivery of the affected aircraft. As certification for the Eurocopter France model EC130T2 is imminent, the FAA finds that good cause exists for making these special conditions effective upon issuance.

Comments Invited

While we did not precede this with a notice of proposed special conditions, we invite interested people to take part in this rulemaking by sending written comments, data, or views. The most helpful comments reference a specific portion of the special conditions, explain the reason for any recommended change, and include supporting data.

We will consider all comments we receive by the closing date for comments. We will consider comments filed late if it is possible to do so without incurring expense or delay. We may change these special conditions based on the comments we receive.

Background and Discussion

On October 7, 2008, Eurocopter France applied to amend Type Certificate No. H9EU to include the new EC130T2 model. The EC130T2 model is a derivative of the

EC130B4, which is currently approved under Type Certificate No. H9EU. The EC130T2 is a 14 CFR part 27 normal category, single-engine rotorcraft, which will be certificated for single-pilot operation and a maximum of seven passengers. This model includes increased performance from the Turbomeca Arriel 2D engine, an upgraded main transmission, new vehicle engine management display (VEMD) avionics, and an active vibration control system.

Eurocopter France proposes that the EC130T2 model use a novel and unusual design feature, which is a 30-minute power rating, identified in the Arriel 2D engine type certification data sheet (TCDS) [FAA Turbomeca TCDS No. E00054EN]. 14 CFR 1.1 defines “rated takeoff power” as limited in use to no more than 5 minutes for takeoff operation. Thus, the use of takeoff power for 30 minutes will require special airworthiness standards, known as special conditions, to address the use of this 30-minute power rating and its effects on the rotorcraft. These special conditions will add requirements to the existing airworthiness standards in 14 CFR 27.923 (Rotor drive system and control mechanism tests), § 27.1305 (Powerplant instruments), and § 27.1521 (Powerplant limitations).

For the EC130T2, the European Aviation Safety Agency (EASA) has issued CRI E-02, which documents the special conditions.

The following is a summary of the final special conditions:

In addition to the requirements of Section 27.923, Rotor Drive System and Control Mechanism Tests, the aircraft drive-system effects due to use of the 30-minute power rating versus the Takeoff (5-minute) rating must be accounted for in the rotor drive-system testing.

In addition to the requirements of Section 27.1305, Powerplant Instruments, since this new 30-minute power rating has a time limit associated with its use, the pilot must have the means to identify:

- When the rated engine power level is achieved,
- When the event begins, and
- When the time interval expires.

In addition to the requirements of Section 27.1521, Powerplant Limitations, a new 30-minute rating must be defined for the use of takeoff power for greater than 5 minutes and must be limited to no more than 30 minutes per use.

Furthermore, the Model EC130T2 rotorcraft flight manual must include limitations on use of the 30-minute power rating to state:

- Continuous use above MCP is limited to 30 minutes, and
- Cumulative use above MCP is limited to 1 hour per flight.

Type Certification Basis

Under 14 CFR 21.101, Eurocopter France must show that the EC130T2 model helicopter meets the applicable provisions of the regulations incorporated by reference in Type Certificate No. H9EU, or the applicable regulations in effect on the date of application for the amendment to the type certificate. The regulations incorporated by reference in the type certificate are commonly referred to as the "original type certification basis." The regulations incorporated by reference in H9EU are as follows:

(a) 14 CFR 21.29, and part 27 Amendments 27-1 through 27-32, except 14 CFR 27.952 is not adopted.

(b) 14 CFR 36 Appendix H through Amendment 20

(c) Special Condition 27-009-SC for HIRF

(d) Equivalent Level of Safety Findings issued against:

(1) 14 CFR 27.1549(b) Powerplant Instrument Markings.

(2) 14 CFR 27.1027(b)(2) Main Gearbox Oil Filter Bypass

The Administrator has determined that the applicable airworthiness regulations (that is, 14 CFR part 27) do not contain adequate or appropriate safety standards for the EC130T2 model helicopter because of a novel or unusual design feature. Therefore, special conditions are prescribed under the provisions of 14 CFR 21.16.

The FAA issues special conditions, as defined by 14 CFR 11.19, in accordance with 14 CFR 11.38, and they become part of the type certification basis under § 21.101.

Special conditions are initially applicable to the model for which they are issued. Should the type certificate for that model be amended later to include any other model that incorporates the same novel or unusual design feature, or should any other model already included on the same type certificate be modified to incorporate the same novel or unusual design feature, the special conditions would also apply to the other model.

Novel or Unusual Design Features

The EC130T2 model helicopter will incorporate a novel or unusual design feature, which is:

- A 30-minute power rating.

Applicability

These special conditions are applicable to the Eurocopter France Model EC130T2 helicopter. These special conditions would apply if Eurocopter France seeks to amend

Type Certificate No. H9EU to add another model that has the same unusual design feature.

Conclusion

This action affects only certain novel or unusual design features on the Eurocopter France Model EC130T2 helicopter. It is not a rule of general applicability, and it affects only the applicant who applied to the FAA for approval of this feature.

List of Subjects in 14 CFR Part 27

Aircraft, Aviation safety, Reporting and recordkeeping requirements.

The authority citation for these special conditions is as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701-44702, 44704.

The Special Conditions

Accordingly, pursuant to the authority delegated to me by the Administrator, the following special conditions are issued as part of the type certification basis for Eurocopter France model EC130T2 helicopter. Unless stated otherwise, all requirements in §§ 27.923, 27.1305 and 27.1521 remain unchanged.

(a) Section 27.923 Rotor drive system and control mechanism tests, at Amendment 27-29. In addition to the requirements of this section, the test prescribed in § 27.923(e) must be conducted in intervals of not less than 30 minutes.

(b) Section 27.1305 Powerplant instruments, at Amendment 27-37. In addition to the requirements of this section, a means must be provided to indicate to the pilot when the engine is at the 30-minute power level, when the event begins, and when the time interval expires.

(c) Section 27.1521 Powerplant limitations, at Amendment 27-29. In addition to the requirements of this section, use of the 30-minute power must be limited to no more than 30 minutes per use, and no more than one hour per flight. The use of the 30-minute power must also be limited by:

- (1) The maximum rotational speed, which may not be greater than--
 - (i) The maximum value determined by the rotor design; or
 - (ii) The maximum value demonstrated during the type tests;
- (2) The maximum allowable gas temperature; and
- (3) The maximum allowable torque.

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